

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claims 1 to 3. (Canceled).

4. (Currently amended) A method for anisotropic plasma etching of a substrate, the method comprising:

generating, with a plasma source that is configured to generate a high-frequency electromagnetic alternating field, a plasma having reactive species inside a chamber in a reaction region by the action of the alternating field upon an etching gas inserted into the reaction region and a passivating gas inserted into the reaction region;

in the reaction region, inserting the etching gas predominantly into a first zone and inserting the passivating gas predominantly into a second zone;

generating a reactive etching gas species in the first zone by using a plasma that is generated there, and generating reactive passivating gas species in the second zone by using a plasma that is generated there, whereby etching species and passivating species are generated at least largely independently of one another; and

mixing the etching gas species and the passivating gas species with each other in a mixing region downstream from the reaction region before their action upon the substrate,

wherein a quantity of the passivating gas that is used is minimized compared to a quantity of the etching gas.

5. (Currently amended) A method for anisotropic plasma etching of a substrate, the method comprising:

generating, with a plasma source that is configured to generate a high-frequency electromagnetic alternating field, a plasma having reactive species inside a chamber in a reaction region by the action of the alternating field upon an etching gas inserted into the reaction region and a passivating gas inserted into the reaction region;

in the reaction region, inserting the etching gas predominantly into a first zone and inserting the passivating gas predominantly into a second zone;

generating a reactive etching gas species in the first zone by the use of a plasma that is generated there, and generating a reactive passivating gas species in the second zone by the

use of a plasma that is generated there, whereby etching species and passivating species are generated at least largely independently of one another; and

mixing the etching gas species and the passivating gas species, with each other in a mixing region downstream from the reaction region before their action upon the substrate, wherein at least an approximately constant proportion of energy introduced by the plasma source into the plasma is input into the passivating gas at least approximately independently of the passivating gas flow in the reaction region.